

WHAT IS CLAIMED IS:

1. A vehicle seat assembly adapted to be supported on a floor pan of a vehicle, said assembly comprising:

a plurality of rails arranged into rail pairs, wherein at least one rail pair defines a mounting rail and a triggering rail, wherein one of said mounting rail and said triggering rail is supported on the floor pan of the vehicle and the other of said mounting rail and said triggering rail is adapted to support a seat cushion, and wherein said mounting rail and said triggering rail are moveably supported relative to each other; and

a field effect sensor operatively supported by said mounting rail such that said field effect sensor can be positioned in a first range of positions as well as a second range of positions relative to the triggering rail, said field effect sensor adapted to emit an electric field and to detect disruption of said electric field, wherein said field effect sensor detects disruption of said electric field when said field effect sensor is positioned in said first range of positions.

2. A vehicle seat assembly as set forth in claim 1, wherein said triggering rail defines a trigger point which defines said first range of positions and said second range of positions.

3. A vehicle seat assembly as set forth in claim 2, wherein said trigger point is located at a terminal end of said triggering rail.

4. A vehicle seat assembly as set forth in claim 1, wherein said field effect sensor is in electrical communication with a controller and is adapted to generate a first signal received by said controller when said field effect sensor is positioned in said first range of positions, and wherein said field effect sensor is adapted to generate a second signal received by said controller when said field effect sensor is positioned in said second range of positions, wherein said controller controls a restraint system in a first manner when said first signal is received by said controller, and wherein said controller controls said restraint system in a second manner when said second signal is received by said controller.

5. A vehicle seat assembly as set forth in claim 1, further comprising a mounting bracket with a first surface, said mounting bracket adapted to operatively support said field effect sensor relative to said first surface, said mounting bracket also adapted to be operatively supported by said mounting rail.

6. A vehicle seat assembly as set forth in claim 5, wherein said field effect sensor is molded to said mounting bracket.

7. A vehicle seat assembly as set forth in claim 5, wherein said field effect sensor defines a sensing area which is smaller than said first surface of said mounting bracket.

8. A vehicle seat assembly as set forth in claim 5, wherein said field effect sensor comprises a logic device and a plurality of electrode pairs, said electrode pairs including an

active pair and at least one inactive pair, wherein said active pair is the only electrode pair in communication with said logic device.

9. A vehicle seat assembly as set forth in claim 8, wherein said electrode pairs are aligned parallel to a longitudinal axis of said triggering rail.

10. A vehicle seat assembly as set forth in claim 1, wherein the seat cushion defines a middle and a side, and wherein said mounting rail defines a first side located adjacent the middle and a second side located adjacent the side, and wherein said field effect sensor is supported by said mounting rail on said first side.

11. A vehicle seat assembly adapted to be supported on a floor pan of a vehicle, said assembly comprising:

- a seat cushion;

- a seat back operatively supported relative to said seat cushion;

- a plurality of rails arranged into rail pairs, wherein at least one rail pair defines a mounting rail and a triggering rail, wherein one of said mounting rail and said triggering rail is supported on the floor pan of the vehicle and the other of said mounting rail and said triggering rail is adapted to support said seat cushion, and wherein said mounting rail and said triggering rail are moveably supported relative to each other to thereby allow movement of said seat cushion within the vehicle; and

- a field effect sensor operatively supported by said mounting rail such that said field effect sensor can be positioned in a first range of positions as well as a second range of

positions relative to the triggering rail, said field effect sensor adapted to emit an electric field and to detect disruption of said electric field, wherein said field effect sensor detects disruption of said electric field when said field effect sensor is positioned in said first range of positions.

12. A vehicle seat assembly as set forth in claim 11, wherein said triggering rail defines a trigger point which defines said first range of positions and said second range of positions.

13. A vehicle seat assembly as set forth in claim 12, wherein said trigger point is located at a terminal end of said triggering rail.

14. A vehicle seat assembly as set forth in claim 11, wherein said field effect sensor is in electrical communication with a controller and is adapted to generate a first signal received by said controller when said field effect sensor is positioned in said first range of positions, and wherein said field effect sensor is adapted to generate a second signal received by said controller when said field effect sensor is positioned in said second range of positions, wherein said controller controls a restraint system in a first manner when said first signal is received by said controller, and wherein said controller controls said restraint system in a second manner when said second signal is received by said controller.

15. A vehicle seat assembly as set forth in claim 11, further comprising a mounting bracket with a first surface, said mounting bracket adapted to operatively support

said field effect sensor relative to said first surface, said mounting bracket also adapted to be operatively supported by said mounting rail.

16. A vehicle seat assembly as set forth in claim 15, wherein said field effect sensor is molded to said mounting bracket.

17. A vehicle seat assembly as set forth in claim 15, wherein said field effect sensor defines a sensing area which is smaller than said first surface of said mounting bracket.

18. A vehicle seat assembly as set forth in claim 15, wherein said field effect sensor comprises a logic device and a plurality of electrode pairs, said electrode pairs including an active pair and at least one inactive pair, wherein said active pair is the only electrode pair in communication with said logic device.

19. A vehicle seat assembly as set forth in claim 18, wherein said electrode pairs are aligned parallel to a longitudinal axis of said triggering rail.

20. A vehicle seat assembly as set forth in claim 11, wherein said seat cushion defines a middle and a side, and wherein said mounting rail defines a first side located adjacent said middle and a second side located adjacent said side, and wherein said field effect sensor is supported by said mounting rail on said first side.